DOCUMENT RESUME

ED 275 304 IR 012 364

AUTHOR Grantham, J. O.
TITLE Transforming Higher Education or (NUTN and the Information Age).
PUB DATE Dec 85
NOTE 9p.; Paper presented at the Annual Conference of the National University Teleconference Network (4th, Stillwater, OK, December 9-11, 1985).
PUB TYPE Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Access to Information; Communications Satellites; *Futures (of Society); *Higher Education; *Information Dissemination; Information Needs; *Information Networks; Technological Advancement; *Telecommunications; *Teleconferencing
IDENTIFIERS *National University Teleconference Network

ABSTRACT

New values, economic necessity, computers, and telecommunications interacting on each other are transforming our personal lives and our institutions. These changes can be for the good if we transform ourselves to handle them properly as a new dimension in society. Higher education, by its very nature, should be affected profoundly as we move into the information age, and if our academic institutions will not transform themselves to meet the demands of the student, private corporations will. To meet these demands, academic institutions will need more information, more quickly disseminated, and more widely dispersed both internally and externally. The goal of the National University Teleconference Network (NUTN) is to become a major satellite networking organization for higher education. Instructors, researchers, and continuing educators, as well as personnel in other vital university services lacking the time and know-how to organize special communications networks, can rely on NUTN as the pipeline for the flow of information in the field as the system increases its skill in establishing ad hoc telecommunications networks. In this way, academic institutions will transform their situations to meet the challenges of the information age. (KM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED275304

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it
☐ Minor changes have been made to improve reproduction quality
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

TRANSFORMING HIGHER EDUCATION
or
(NUTN* and the Information Age)

by
J. O. Grantham*

Note: This paper was presented at the Fourth Annual Conference of the National University Teleconference Network held on the campus of Oklahoma State University, December 9, 10, & 11, 1985.

- -

While shopping with my 10 year old grandson for one of his favorite toys I acquired some additional insight into the human condition in this emerging information age.

If you have children around the age of 10 years you know, from the holes in your pocket book if nothing else, about Cabbage Patch Dolls and Transformer Toys. The other day my grandson was conning me into a major expenditure for another Transformer. I picked up the packaged toy, amazed at is intricate mechanisms, and was even more amazed by the carefully crafted advertisement on the box. Here is what it said, "It is a world transformed, where things are not what they seem. It is the world of the TRANSFORMERS . . . A world of heroic autobots and evil decepticons".

HASBRO TOY CO., PAWTUCKET, R.I.

The toy industry grosses over 3 billion dollars a year. With that kind of money at stake, some of the best brains in the advertising world must have worked long and hard to come up with that statement. To be effective the statement had to impress adults and kids alike. The operative word here is transformer.

Impressed with the term transformer I became more sensitive to its use elsewhere, I have been amazed at where I have seen it. For instance:

"It is time to get involved. In a world transformed by technology, demographic shifts, etc. We are being asked new questions" (a quote from brochure announcing the 1986 Meeting of American Association of Higher Education).

* The National University Teleconference Network

** Mr. Grantham is Founder of NUTN and Chairperson of the Advisory Board. In addition he is Director of University Extension, at Oklahoma State University

IR012364

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
J.O. Grantham
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

"Reinventing the Corporation - Transforming your job and your Company for the New Information Society." (Title of new book recently issued by John Naisbitt and Patricia Aburdene). Seemingly this word is being used frequently in all segments of our society.

We hear a lot about change these days. The need to change has intensified and is cumulative. As one part of our world changes, it mandates changes in others. This effect has now reached the point where to survive we too must change and the change cannot be cosmetic. A stronger term is needed to

convey the depth of change required. Thus the emergence of the term - transformed or transformer

It is clear that we will transform or be transformed in spite of ourselves. We will be transformers shaping the swirling chaotic forces about us or, like a leaf in a river, be carried along by the current to an unknown destination powerless to do anything about it. The choice is ours.

If we would be transformers then we must know the forces with which we must deal.

A TRANSFORMING SOCIETY

Naisbitt says we are living at one of those rare times in history when the two crucial elements for change are present at the same time - new values and economic necessity. This explains why at this time we are subject to such intense pressure for change.

The nature of morality and the proper life are shifting as more women enter the work place, as people live longer, as material achievements become easier, as poverty is reduced, as people become better educated and more independent, as the basic unit of society, the family, reconstitutes itself. New values are emerging form these and other changes.

Our economy is now threatened by worldwide competition. Our basic industries on which we have all depended are disappearing. Our jobs are evaporating without warning - and with it all we hear about a golden age - the information age which will supply us with 90% of our jobs by the year 2000. We must have those jobs to replace the ones we are losing and provide work for the upcoming generation. This is a growing economic necessity.

Harlan Cleveland writing in the July/August, 1985 issue of Change magazine puts it this way. He says this revolution really became serious about 25 years ago when computers and telecommunications converged to produce one interlocking industry that is transforming (notice the word) our personal lives, our national politics and our global affairs.

The British magazine, The Economist, in its November 23, 1985 issue dealt with this matter. Jim Rohwer wrote in the introduction to an article on telecommunications that, "The 45 million telephone calls that Americans will place every hour this year are only a drop in the flood of information that will be coursing electronically around the world before this century is out. Man is adding to this information-transmission capacity at an astonishing rate. A single company can now put together a private telecommunications network which has more capacity than all the public networks on earth had in the early 1960's.

New values, economic necessity, computer, telecommunications - they are all part of a pattern, interacting on each other with a resultant impact on our personal lives and our institutions unparalleled outside of the pestilences of old - war, famine, plague and natural disasters. That changes of this magnitude can be for the good if we will but transform (there is that word again) ourselves to handle them properly is a new dimension in society.

HIGHER EDUCATION TRANSFORMED

We here assembled are either part of higher education or interested in interacting with this vital part of society. So we have a special interest in how all this change will affect our institutions. The scenario described above is awesome. Higher education, by its very nature should be affected profoundly. We are moving into the information age. Information (i.e., knowledge) is our business. We generate and accumulate information and transform (this word again) it into knowledge through the instructional process. So each of these phenomena - changing values, economic necessity - computers, telecommunications impact the Academy. Changes ensue. We are the recipients of the effects of these changes.

Russell Edgerton, President of AAHE in 1983-84, put it this way,

> "Although it may seem elusive and groping, the information society is a useful term. In planning the 1983 National Conference, we did not want to focus simply and narrowly on the use of information technologies for educational purposes. We also wanted to consider how the computer and telecommunications revolution are transforming (that word again) the U.S. into a new kind of society, and how this shift affects everything colleges and universities do, including what many feel to be the heart of the enterprise, the substance of liberal learning."

Naisbitt stated, "In the new information society where the only constant is change, we can no longer expect to get an education and be done with it. There is no one education, no one skill, that lasts a lifetime . . . In a world that is constantly changing there is no one subject or set of subjects that will serve you for the foreseeable future, let alone the rest of your life. The most important skill to acquire is learning how to learn."

This is the job of education in the 1990's. Whether our academic institutions will be up to it or not is open to question. The job will be done. The future of this country's economy depends on it. Naisbitt stresses that already American and world businesses are doing most of their own training and education. They have a program which is so vast (approximately 60 billion per year and equal to that spent on traditional higher education) that it now represents an alternative education system.

SO IF OUR ACADEMIC INSTITUTIONS WILL NOT TRANSFORM THEMSELVES TO MEET THE DEMANDS OF THE STUDENT (FULL OR PART TIME) IN THE INFORMATION AGE, PRIVATE CORPORATIONS WILL.

Harlan Cleveland also focuses in on the information age and its impact on education. He quotes Francis Bacon who in 1597 state that knowledge is power. So the wider the spread of knowledge, the more diffused is the power. When people are educated and are not treated that way, they rebel. In an information society, the very nature of control changes. Hierarchical and autocratic management and administration become counterproductive. Conferring, seeking consensus and networking describe the effective management style in the information age.

More participatory decision making requires more and more information, much feedback and time to do it. Computers and telecommunications have helped us create this new society and it is thru the wise utilization of their capabilities that we will find the way to manage our affairs in this new age.

The academy will need MORE INFORMATION, MORE QUICKLY DISSEMINATED AND MORE WIDELY DISPERSED - BOTH INTERNALLY AND EXTERNALLY, if it would be effective in the information age. The barrier here is not lack of funds to travel, to hire assistants and acquire equipment - as important as are these matters. The barrier is TIME, available time to do what we must do. The faculty member and the academic administrator need more time than ever and have less. This is our dilemma.

The computer and telecommunications, which are largely responsible for this age, are a means whereby we can ameliorate the problem of time - providing we use them creatively.

And this is where NUTN comes in.

We are a by-product of the coming of the information age to higher education. Had we not created NUTN, it would have emerged form some other source. The service we strive to provide to higher education is becoming increasingly necessary.

Not a week goes by but what our Central Office staff receives dozens of calls from higher educational institutions wanting to find out how they can either become involved in telecommunications or utilize a newly installed facility to receive and distribute programs. Not a week goes by but what external groups call to determine how they might reach students, faculty and staff. The trend toward more extensive use of telecommunications is already apparent. Higher Education is transforming itself slowly but surely.

NUTN's future rests with its ability to provide needed service to this growing component of the Academy. Inevitably more and more higher education institutions are going to obtain the capability to receive satellite signals - primarily for video and data reception and primarily for internal use within the institution.

About 5%, in our estimation, will make the investment necessary to originate programs. Each originating institution is going to generate its own internal network and the corresponding regional system (i.e., urban, state, etc.) to serve its own clientele. But these local networks are not enough if higher education, as a whole, is to maximize, as it must, the value of telecommunications. Sharing on a national and an international basis is a fundamental requirement for higher education in the information age. This calls for specialized networking addressing special needs.

NUTN is no longer just a tool whereby continuing educators can conduct a larger conference (via satellite video teleconference) and try to make more money. This is a narrow and limited use of a potentially more valuable service. And besides most continuing educators don't know how to use the medium for their own benefit. This we have learned the hard way in the over 3 years we have been in operation. It takes an entrepreneurial spirit and a level of marketing skill not normally found on the staff of a continuing education unit.

As it has been in business and industry, entrepreneurship is the key to the future in continuing education - it is the key to survival. Those of you here representing continuing education units had better be subscribing to Venture magazine and Inc. as well as Continuem or the Adult Education Journal if you expect to survive. Peter Drucker argues that entrepreneurship is America's key to a golden future. Continuing educators must infuse their organizations with this spirit to survive.

NUTN's goal is to become a major satellite networking organization for higher education. If we accomplish this goal, our future is assured.

Look at it this way. Higher education institutions, as was previously mentioned, are going to acquire the capability to send and receive information via computer and satellite. All functions of the university, not just continuing education alone, are going to need this service.

Instructors are going to need special networks to link and draw together those of like concern and interest to share information thereby enriching immeasurably the educational process - but the faculty member doesn't have the time nor the know-how to make all of the contacts to arrange the special ad hoc networks involving the necessary colleges and universities. NUTN does.

Researchers, to avoid costly and time wasting duplication, must share information more widely and more frequently with their colleagues in other institutions, in other companies, and in foreign lands. They don't have the time nor the know-how to put their special networks together. NUTN does.

Continuing educators, who instinctively recognized the potential of this medium first, can and should build a whole new constituency for their institutions. They can enhance the service to their present clientele. They can enrich their program offerings immensely by creatively tapping the talent and the resources of, yes, the world. We now know that large networks can be put together. 200, 400, a 1000 sites can be linked together. For the continuing educator who has the entrepreneurial spirit, the potential is there. ONE PROGRAM, PROPERLY PRICED AND PROMOTED, CAN GENERATE REVENUE ABOVE THAT OF ALL OTHER REGULAR PROGRAMMING FOR THE YEAR. Continuing educators, should design more such programs. NUTN can organize the required network of academic institutions and non-academic organizations.

And the other vital but tertiary services of the university, athletics, student services, alumni, foundations, international

programs, etc. all desperately need to confer frequently and extensively with their counterparts across the nation and the world. Teleconferencing is one answer, computer linkages, another. Professional associations don't have the time nor the know-how to put their special networks together. NUTN does. We can be pipeline for the flow of information in higher education.

Finally, the whole world is desirous of communicating with higher education as never before. Every state perceives, and rightly so, that its colleges and universities are a key resource (especially in this information age) for economic development. Dialogues between the members of the Academy and business and government are intensifying. They are now so intertwined, and becoming more so, that communication requirements are enormous. The satellite video and audio teleconference and computer linkages are two ways of handling this need. Thus the demand from government and business to establish needed ad hoc networks is going to proliferate. Here again, NUTN is uniquely situated to provide such service.

So let me state that in view of what is happening in society worldwide and its impact on higher education, NUTN is in a position to provide a much needed telecommunications service. This is the same concept we started with in one sense but in another it is much broader - and more vital to the Academy. What began as an arm of continuing education now goes far beyond that narrow concept. We can and must serve the entire university.

Continuing education can be the focal point for such service on a campus if it will be willing to. If not the service will be provided by other groups. From where I stand this seems to me to be an ideal role for continuing education and, at a time when many such units are having troubles on their campuses, can help them strengthen internal ties. I know there is a question of costs but these can be overcome.

I want to make an observation about the NUTN representatives on a campus. it is clear that the NUTN representative, wherever he/she is located, must be much more than a receiver of program announcements and a distributor of the same. The potential for innovation, for on campus service as well as off is enormous. THIS MUST BECOME THE PRIMARY RESPONSIBILITY OF A PERSON AND eventually a SPECIAL UNIT with a number of service personnel handling the diverse needs of instruction, research and continuing education equally well. The expense of providing this service must be borne by all the units participating. From the contacts I have made I don't see a problem.

NUTN must increase its skill in establishing ad hoc communication networks. In addition to video and audio teleconferencing we must learn more about how to integrate computers into our service repertoire. We have a start with CONFER but we need to go beyond this.

All in all NUTN and all who are connected with it have a great future if we will but act. We can be transformers (ah! that word) and in the language of our toy makers, utilize our "heroic gobots" to dispel the "evil decepticons" of inertia, lack of vision, ignorance and fear and help bring about a new level of performance in our institutions. This is our challenge. I know you are ready to transform your situation to meet challenges of the information age.

The end.